Please print or type in the unshaded areas	EPA ID Number *(copy from item I of Form 1)* **VAD003121928**	Form Approved. OMB No. 2040-0086 Approval expires 5-31-92

Form **2F** NPDES

United States Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number *(list)*	B. Latitude			C. Longitude			D. Receiving Water *(name)*
905	***37***	***17***	***00***	***77***	***16***	***00***	***Bailey Creek via East Bear Creek***
906 (incl. 601)	***37***	***17***	***00***	***77***	***16***	***00***	***Bailey Creek via West Bear Creek***
The following is listed on the current permit, but should be removed because there is no discharge:							
013	37	17	15	77	15	45	Tributary to Bailey Creek- no flow > 10 yr.

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	Source of discharge		a. req.	b. proj.
Facility Lead Agreement 2/2002	905/906	Former wastewater treatment units that potentially contaminated ground-water	See attached Fact Sheet 2008. EPA agrees migration of contaminated groundwater under control. Ecological sampling is being evaluated to determine any ecological impacts that need attention.	NA	12/ 2013
For Part II.B *(Below)*					
None	905		Attached - Zinc Source/Minimization Summary		
None	906		Attached - Copper Source/Minimization Summary		

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structure control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each are not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

See Site Map #1 and Site Map #2

 Continued on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
All	See Attachment for Form 2F, IV A, B, C				

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

See Attachment for Form 2F, IV A, B, C

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
All	See Attachment for Form 2F, IV A, B, C	

V. Non Stormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name of Official Title *(type or print)*	Signature	Date Signed
Karl R. Bostaph, Plant Manager		08/19/2009

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Regular inspections and reviews of maps and engineering drawings, details attached.
See Attachment for Form 2F, V-B

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

There have been no significant leaks or spills of toxic or hazardous pollutants in stormwater drainage areas for over three years. Toxic and hazardous materials are transferred in areas that drain to the industrial sewer system, so any spills are usually not significant to stormwater outfalls. We have trained in-house responders, equipped to neutralize spills and make appropriate recovery and ensure ultimate disposal should they occur. Outside contractors and consultants are available on a non-routine basis.

The last spill that appeared to have affected an outfall occurred in 2005. It was about ten pounds of hydroxypropylcellulose product. This is an innocuous physiologically inert material produced for use in food/pharmaceuticals, but in water has a propensity to foam. Filter socks were improved and drainage from small area redirected to industrial process sewer. Corrective measures have minimized the potential for appearance of foam at outfall.

Continued from Page 2

VII. Discharge Information

A,B,C, & D: See instruction before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

X Yes *(list all such pollutants below)* ☐ No *(go to Section IX)*

VII.E pertains to discharges not covered by analysis.

We do not believe there are other potential discharges; however, in the interest of completeness the following are considered:

Xylene – gasoline component used in motor vehicles. Not believed present at Outfalls 005 and 006; each tested nil < 2 µg/L xylene. We did analyze for benzene, ethylbenzene and toluene for permitting rain event. Grabs and composites all nil (< 1).

Chlorine – potentially from potable (city) water used at site; believed not present at outfalls. Also, 005 and 006 each tested nil < 0.1 mg/L.

Asbestos – some asbestos areas remain in buildings on plant; however, it is stabilized and there is no exposure to rainwater.

Cobalt – used in *de minimis* amounts inside process building that is not in a drainage area.

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

X Yes *(list all such pollutants below)* ☐ No *(go to Section IX)*

In accordance with current VPDES permit (Part 1.E requirements), acute toxicity has been performed annually using *Ceriodaphnia dubia* at Outfalls 905 and 906 for the years 2005 through 2008.

All toxicity tests were conducted at Coastal Bioanalytics Inc., 6400 Enterprise Court, Gloucester, VA 23061 - (804) 694-8285

All toxicity outfall results have been submitted to DEQ.

IX. Contact analysis Information

Were any of the analysis reported in item VII performed by a contact laboratory or consulting firm?

X Yes *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ No *(go to Section X)*

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
James R. Reed & Associates	770 Pilot House Drive, Newport News, VA 23606	(757) 873-4703 (757) 873-1498 (FAX)	TOC, TSS, COD
Universal Laboratories	20 Research Drive Hampton, VA 23666	(757) 865-0880 (757) 865- 8014	TOC, TSS, COD, BOD, TKN, ammonia, metals, volatiles semi-volatiles,

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title *(type or print)*	B. Area Code and Phone No.
Karl R. Bostaph, Plant Manager	(804) 541-4400
C. Signature	D. Date Signed
	08/19/2009

 Continued on Page 3

Outfall 905

EPA ID Number *(copy from Item I of Form 1)*
VAD003121928

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge Information *(Continued from page 3 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled		Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab	Composite	
Oil & Grease	< 5 mg/L	NA	--	--	1	-	Stormwater, groundwater, firewater, and steam condensate, run-on from Intake 007
Biological Oxygen Demand (BOD5)	8 mg/L	6 mg/L	--	--	1	1	
Chemical Oxygen Demand (COD)	78 mg/L	60 mg/L	55 mg/L	--	7	1	
Total Suspended Solids (TSS)	115 mg/L	52 mg/L	52 mg/L	--	7	1	
Total Organic Nitrogen	0.9 mg/L	0.8 mg/L	--	--	1	1	
Total Phosphorus	0.35 mg/L	0.19 mg/L	0.21 mg/L	--	7	1	
pH (all are Grab samples)	8.6	NA	7.4	Maximum	7		

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled		Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab	Composite	
Total Kjeldahl Nitrogen	3.4 mg/L	1.3 mg/L	1.7	--	7	1	Stormwater, groundwater, firewater, and steam condensate Zn-from offsite (intake 007) Cu is an analyte at 005/905 Given SWPP, Zn is the only material used that logically may be expected (city water) There is no exposure of propylene oxide to rain water in 905 drainage area and testing should not be required
Ammonia (for org N)	0.3 mg/L	0.5 mg/L	--	--	1	1	
Dissolved Zinc	431 µg/L	18 µg/L	187	--	13	1	
Hardness, (not required)	115 mg/L	77 mg/L	--	--	1	1	
Dissolved Copper, (not required)	2 µg/L	4 µg/L	--	--	1	1	
Propylene Oxide is used on site - but no exposure to rain water –not expected							
Propylene Oxide (PO)	< 5 mg/L	< 5 mg/L	<5mg/L	--	7	1	
Composite sampling done for dissolved metals; Form 2F requests composite sampling of dissolved metals in that it is listed in the facility permit for its wastewater . EPA protocol is to take grab samples only for dissolved metals to minimize potential for contamination. We sampled and analyzed composite dissolved metals in the interest of providing all data of potential interest.							
TOC data provided in the interest of using TOC as loading indictor instead of COD, which is far less specific. See cover letter request to switch to TOC instead of COD.							
TOC	7.8 mg/L	7.4 mg/L	--	--	1	1	

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled		Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite*	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab	Composite	
Benzene	< 1 µg/L	< 1 µg/L			1	1	Gasoline used in motor vehicles
Ethylbenzene	< 1 µg/L	< 1 µg/L			1	1	
Toluene	< 1 µg/L	< 1 µg/L			1	1	
Chloroethane	< 1 µg/L	< 1 µg/L			1	1	Used in manufacture
Chloroform	< 1 µg/L	< 1 µg/L			1	1	May be in potable water

The Outfall 905 discharge was analyzed for these Table 3 analytes only because they are contained in materials used at the plant site and/or they were analyzed under prior permits.

We did not believe that any of the above are present because of an absence of releases in drainage area due to a sound surface water protection plan and because they were not found in Outfall 005 effluent. Nil results verify the not present belief.

*Per general sampling instructions, VOC composites are taken at intervals during the event.

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total Rainfall during Storm Event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
6/3/09	35	0.80	141	2850 GPM	0.17 MG

7. Provide a description of the method of flow measurement or estimate.

Duration of storm event is time of rainfall. The weighted composite total flow was determined by ISCO flow meter reading at V-notch weir. Maximum flow is estimated based on total flow and observed flows.

VII. Discharge Information *(Continued from page 2 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled		Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab	Composite	
Oil & Grease	< 5 mg/L	NA	--	--	1	-	Stormwater, ground-water, non-contact cooling water, storm runoff from EC, CMC, and Lab areas (601), firewater (601), and steam condensate (601).
Biological Oxygen Demand (BOD5)	11 mg/L	8 mg/L	--	--	1	1	
Chemical Oxygen Demand (COD)	134 mg/L	65 mg/L	58 mg/L	--	7	1	
Total Suspended Solids (TSS)	131 mg/L	66 mg/L	46 mg/L	--	7	1	
Total Organic Nitrogen	0.8 mg/L	0.8 mg/L	--	--	1	1	
Total Phosphorus	0.55 mg/L	0.27 mg/L	0.23 mg/L	--	7	1	
pH (all are Grab samples)	7.3	NA	7.1	--	7	-	

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled		Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-weighted Composite	Grab	Composite	
Total Kjeldahl Nitrogen	4.0 mg/L	1.0 mg/L	2.0 mg/L	--	7	1	Stormwater, groundwater, firewater, and steam condensate Zn-From offsite (007) Cu is an analyte at 005/905 Given SWPP, Zn is the only material used that logically may be expected (city water) There is no exposure of propylene oxide to rain water in 905 drainage area and testing should not be required
Ammonia (for org N)	0.2 mg/L	0.2 mg/L	--	--	1	1	
Dissolved Zinc (not required)	16 µg/L	52 µg/L	--	--	1	1	
Hardness, (not required)	67 mg/L	82 mg/L	--	--	1	1	
Dissolved Copper,	52 ug/L	5 ug/L	3 ug/L	--	7	1	
Propylene Oxide is used on site - but no exposure to rain water –not expected							
Propylene Oxide (PO)	*< 5 mg/L*	< 5 mg/L	*< 5 mg/L*	--	7	1	
Composite sampling done for dissolved metals; Form 2F requests composite sampling of dissolved metals in that it is listed in the facility permit for its wastewater . EPA protocol is to take grab samples only for dissolved metals to minimize potential for contamination. We sampled and analyzed composite dissolved metals in the interest of providing all data of potential interest.							
TOC data provided in the interest of using TOC as loading indictor instead of COD, which is far less specific. See cover letter request to switch to TOC instead of COD.							
TOC	7.6 mg/L	8.3 mg/L	--	--	1	1	

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled		Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite*	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab	Composite	
Benzene	< 1 µg/L	< 1 µg/L			1	1	Gasoline used in motor vehicles
Ethylbenzene	< 1 µg/L	< 1 µg/L			1	1	
Toluene	< 1 µg/L	< 1 µg/L			1	1	
Chloroethane	< 1 µg/L	< 1 µg/L			1	1	Used in manufacture
Chloroform	< 1 µg/L	< 1 µg/L			1	1	May be in potable water

The Outfall 906 discharge was analyzed for these Table 3 analytes only because they are contained in materials used at the plant site and/or they were analyzed under prior permits.

We did not believe that any of the above are present because of an absence of releases in drainage area due to a sound surface water protection plan and because they were not found in Outfall 005 effluent. Nil results verify the not present belief.

*Per general sampling instructions, VOC composites are taken at intervals during the event.

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total Rainfall during Storm Event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
6/3/09	35	0.80	141	1500 GPM	0.09 MG

7. Provide a description of the method of flow measurement or estimate.

Duration of storm event is time of rainfall. The weighted composite total flow was determined by ISCO flow meter reading at V-notch weir. Maximum flow is estimated based on total flow and observed flows.